

Application No.: 10/748,479

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Remarks

Claims 1-11 are pending.

We gratefully acknowledge the Examiners indication that Claims 4 and 9-11 are allowed and that claims 6, 7, and 8 are objected to but would be allowed if written in independent form including all of the limitations of the base claim and any intervening claims. We have amended claims 6 and 7 to independent form including all of the limitations of claim 1 on which those claims were dependent so that claims 6 and 7 together with claim 8 dependent on claim 7 should be allowed.

§ 103 Rejections

The Examiner has rejected claim 1 under 35 USC § 103(a) as obvious over U.S. Patent 5,165,605 to Morita et al. in view of U.S. Patent 4,917,300 to Gloviak et al.

We have amended claim 1 to recite that the body assembly in the claimed liquid spray gun includes a polymeric air cap portion having horns, which polymeric air cap portion is a molding including molded surfaces defining non circular outlet passageways and apertures. This was done to recite what the air cap portion is rather than how it was made in view of the Examiners comments in the last two sentences of the paragraph ending on page 3 of the Office Action under reply.

Morita et al. describe a spray gun that like the spray gun according to the present invention as claimed in claim 1, includes horns projecting past the outlet end of a nozzle on opposite sides of an axis, and an air passageway extending through portions of the horns to outlet passageways having outlet apertures spaced along the horns from the outlet end of the nozzle and facing opposite sides of the axis, those outlet passageways and apertures being non-circular and shaped to direct air under greater than atmospheric pressure flowing through the passageways against opposite sides of a stream of liquid flowing through the nozzle to reshape the stream.

In the spray gun described by Morita et al., however, the horns are of metal and the passageways and apertures are defined by machined surfaces formed by machining which adds significantly to the cost of making the spray gun.

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In contrast, in the present invention the horns are on a polymeric air cap which air cap is a molding including molded surfaces defining non circular outlet passageways and apertures. Such a polymeric air cap is far less expensive to make than a machined air cap, thereby reducing the cost to produce the spray gun. Also, such a polymeric air cap with molded surfaces defining non circular outlet passageways and apertures can easily be made with outlet passageways with many different non circular shapes that may be useful to shape the air stream in different ways.

The Examiner has acknowledged this difference between the spray gun described by Morita et al and the spray gun according to the present invention both in his comments and by citing Gloviac et al. While Gloviac et al. describes a polymeric air cap that is a molding and has horns and outlet passageways and apertures, the outlet passageways and apertures 53 in the horns described by Gloviac et al. are circular. At column 4, lines 24 to 27 Gloviac et al. indicates that with respect to the molded air cap 76 "Diametrically spaced ears or wings 84 (see FIG. 9) extend forwardly from rim 82 and have outwardly diverging flat inner surfaces 85 in which the spray ports 53 are formed." From this language it is not at all clear whether the surfaces defining the spray ports 53 were molded surfaces, or were machined surfaces formed by drilling the spray ports 53 after the air cap 76 was molded. In any event, there is no teaching or suggestion in Gloviac et al to use a polymeric air cap that is a molding including molded surfaces defining non circular outlet passageways and apertures.

It is only in the light of applicant's invention that the combination of Morita et al and Gloviac et al could be suggested.

Claim 1 as amended should be allowed.

Claims 2, 3, and 5 are dependent on claim 1 and thus should be allowed for all of the reasons given above with respect to claim 1.

Reconsideration, entrance of this amendment, and allowance of all of the claims now in this application are respectfully requested.

This amendment was not earlier presented as applicants earnestly believed that claim 1 as earlier presented distinguished over the cited art. The claim has now been amended to more positively recite the claimed structure and not the manner in which it was made in view of the

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Examiners comments in the last two sentences of the paragraph ending on page 3 of the Office  
Action under reply.

Respectfully submitted,

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